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All correspondence should be addressed to :

Council for Sciences of Indonesia,
Medan Merdeka Selatan 11 — P.O. Box 250
Djakarta — Indonesia

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INDONESIAN ABSTRACTS

Abstracts on current scientific Indonesian literature

VOL. III October 1961 Number 4

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0 GENERALITIES
06 INSTITUTIONS

061 : 616.24 (910)
SUHARDI DIRDJOHUSODO

Pengalaman[2] di Balai Pemberantasan Penjakit Paru[2] di Jogjakarta, dari 1 Djanuari 1957 sampai 1 Djanuari 1960 **(Results of the Institute for Lung-diseases in Jogjakarta from 1957-1960)** in *Berita Tuberculosea Indonesiensis* 4(2) : 10 - 40, 1960.

Numerous figures on the results of ambulatory treatment of tuberculosis patients, treated with a combination of streptonycin (2 × 1 gram weekly) and isoniazid (5 — 10 mgr. per kg bodyweight), showing positive results, better that those abroad.

The longer the treatment, the better the result, the smaller the lesions, the better the results; presence of cavities has a negative influence; male patients respond better than famale, which is ascribed to the more frequent lesions in females.

The results with sputum reversion are in accordance with the above. A marked difference was observed in the appearance of resistance for single drug and combined drug therapy; the latter prevents appearance of resistance.

Extensive lesions, cavities (especially the thick walled ones) produce more resistance. The resistance to isoniazid is always higher than that to streptonycin.

3 SOCIAL SCIENCES
33 ECONOMICS

338.92 (922)
CHALIK

Masalah perusahaan nasional dan asing di Djawa Barat **(National and foreign businesses in West Java)** in *Madjalah Ekonomi* 2(8) : 1960.

This article summarises research undertaken by the West Java Chamber of Industry and Commerce comparing size, structure, field of activity, etc., of industrial and trading businesses in West Java owned by nationals and those owned by persons of foreign extraction (mainly Chinese).

The nationally — owned enterprises are on the whole more recently established. Both types are, for the large part, under one — man ownership, and the partnerships and limited liability companies are mainly family concerns relying little on outside resources for capital. Both national and foreign — owned trading businesses are small, but the foreign — owned businesses have a higher percentage of larger concerns. In both cases, little more than 10 percent hold bank accounts.

Industrial businesses are generally larger than the trading businesses, and the larger ones are more heavily concentrated in national hands.

340.141 (910)
DJOJODIGOENO, M. M.

Harapan hukum adat Indonesia **(The prospect of „hukum adat Indonesia")** in *Tjeramah untuk memperingati Dies Natalis XI Universitas Gadjah Mada* **(Lecture to commemorate the XIth Dies Natalis of the Gadjah Mada University**, stencil, 1960, 22 pp.

„Hukum adat" has two meanings: 1. it means common law, and the opposite of a system of „hukum adat" in this connection is a system of codification. 2. „hukum adat" (Indonesia) signifies law based upon principles valid among the indigenous people itself.

Thus the question for the future is twofold: 1. codification or not? 2. should the law be based upon indigenous principles or upon foreign principles? According to the author most Indonesian jurists do prefer the present Dutch codification whereas „hukum adat" is considered obsolete. This view is criticized: in many modern countries there is no codification, moreover, „hukum adat" is not based upon customs. And one should not forget that the present codification is out of date, too. The necessity of investigating the principles which are in force among the people is stressed by the author.

34 : 008
SOETAN MOHAMAD SJAH

Undang - undang adalah karya kebudajaan **(Laws are the outcome of culture)** in *Hukum dan Masjarakat* 3 - 4 - 5 - 6 : 135 - 152, 1960.

An essential of the laws (in the material sense) is their hypothetical form which expresses a „soll" — relationship between two facts. For the legal conception of „sollen" which must be distinguished from the moral one, the term „seharusnja" is chosen by the author whereas „harus" is preferred for the moral conception. However, the hypothetical form is not the only essential of the laws. A norm, to be a legal norm, must be based upon a law in the formal sense, i.c. a product of the government and parliament together. The study of law from this point of view is done by the systematical or dogmatical jurisprudence. But the laws should not be studied in that way only. The making of laws is an act of creation in which ethical decision making is involved. Hence, the laws are the result of creative ability, the outcome of culture, and thus not different for instance from a poem or a novel.

As in the case of a poem or a novel there is a certain image of Man in the stipulations of the laws. Notwithstanding its excellent style, a novel must be rejected if the image of Man which appears from it is not in accordance with the ideals of the reader. The image which is perceptible in the present laws is that of the Bourgeois which does not conform with the ideals of the Indonesian people. So, it is high time to build up a legal system which reflects those ideals.

The image of Man in the laws has not the character of a photo, it is not static, on the contrary, it is a dynamic painting.

343.253 : 343 (910)
HAN BING SIONG

Bertukar pikiran tentang tjara melaksanakan hukuman mati dan tentang beberapa akibat dari hukum peralihan (Djawaban kepada Mr Wirjono Prodjodikoro dan Mr Seno Adji) **(Discussing the execution of capital punishment and some consequences of the transitional law with Mr Wirjono Prodjodikoro and Mr Seno Adji)** in *Beberapa Tindjauan Ilmu Hukum, issued on the occasion of the 8th and 9th Dies Natalis of the Faculty of Law, University of Indonesia 1960* pp. 3 - 56.

In reply to a postscript of Chief Justice Wirjono Prodjodikoro in Hukum 1959 (5 - 6), the author demonstrates extensively on the basis of positive law the impossibility to maintain that at present throughout Indonesia capital punishment must be executed by being shot. The controversy with Mr Seno Adji is about the applicability after the transfer of sovereignty of stipulations dealing with crimes against the King or the Queen. Contrary to Mr Seno Adji who stresses too much the transition of functions, it is pointed out by the author that the transitional law is paramount, not the factual transition of functions. Accordingly those stipulations must be considered invalidated because of conflict with the transfer of sovereignty and the Constitution. And even if they were not invalidated, application by analogy is forbidden. Another problem is the question whether the republican regulation concerning the criminal law was binding in all recovered areas (daerah pulihan) or only in some of them. Different from Mr Seno Adji the author denies its validity in the recovered areas in Kalimantan. On the other hand the author cannot accept the validity of post — World War II criminal law stipulations of the Dutch in the other recovered areas, even not of those stipulations which had no counter-part in the republican criminal law. Mr Seno Adji's opinion is due to the fact that he does not see the existence of a separate republican criminal code beside the code of the Dutch.

343.162 : 347.4(910)
SOEBEKTI

Kekuasaan hakim untuk mentjampuri suatu perdjandjian **(The power of a judge to interfere in a contract)** in *Beberapa Tindjauan Ilmu Hukum, issued on the occasion of the 8th and 9th Dies Natalis of the Faculty of Law, University of Indonesia, 1960* pp. 57 - 64.

Art. 1338 (1) of the Indonesian Civil Code ensures the right of free contract (the so called „open system" of the Law of Contract). The judge, however, may interfere in case of lack of capability of one of the parties, defect of consent, abuse of the economic position of the debtor (Usury Act 1938) and in case the execution of the contract is

contrary to the requirements of good faith (art. 1338 (3)). The Labour Act contains many provisions for interfering by the judge in labour-contracts. In a case of „gadai-tanah" (a kind of mortgage) the Supreme Court has divided the risk of inflation of the currency fifty-fifty among both parties.

347 PRIVATE LAW. CIVIL LAW

347.62 (910)
GOUW GIOK SIONG

Perkawinan tjampuran internasional di Indonesia (**International mixed-marriages in Indonesia**) in *Beberapa Tindjauan Ilmu Hukum, issued on the occasion of the 8th and 9th Dies Natalis of the Faculty of Law, University of Indonesia, 1960* pp. 75 - 92.

Prior to the promulgation of the Indonesian Nationality Law of August 1950, it was doubtful which law should be applied in a case of an international mixed-marriage. Some held that the Mixed-Marriages Regulation of 1898 was applicable and this is in accordance with the legal practice and the opinion of the majority of jurists.

Most important of the said Regulation is art. 2 which, judging from a strictly juridical point of view exposes an equal evaluation of all legal systems. In consequence in a mixed-marriage the woman should follow the man in private as well as in public law. But judging from the position of the spouses it is clear that the condition of the woman is not equal to that of man.

Although the Government has required the consent of the wife in some status changes, e.g. in voluntary submission to European Law, it does not bar the possibility for the husband to change the status of the wife one-sidedly and even contrary to her own welfare.

But with the progress of the women's emancipation movement and other similar international movements with regard a principle like the above mentioned art. 2 as undermining the status of the woman, many countries have abandoned it and changed it into one that gives a greater freedom to the woman. Indonesia is among such countries, art. 7 and art. 8 of the Nationality Act No 62/1958 provides that a foreign woman married to an Indonesian or an Indonesian woman married to a foreigner does not automatically acquire the husband's nationality. Even though there is an attempt to prevent the existence of bipatridie, yet it has to be discarded in the case of an Indonesian woman married to a foreigner. Consequently she might have a double nationality if according to the law of the husband she acquires his nationality beside her own Indonesian nationality.

So, a review should be made of all laws that are contrary to the present provisions concerning international mixed-marriages as regulated by the Indonesian Nationality Law.

347.258 (910)
GOUW GIOK SIONG

Status hukum tanah konsesi pertanian **(The legal status of an agricultural concession)** in *Hukum dan Masjarakat* 3 - 4 - 5 - 6 : 153 - 164, 1960.

The original text of this article was submitted as a legal opinion to the Bremen High Court in the Indonesian tobacco case of 1959.

The term „agricultural consession" (landbouwconcessie) denotes a contract between the Sultan or other high officials of the self-governing land Deli on one hand and the European agricultural enterprises on the other. In the beginning there was no basic form as to how the contract should be drawn, but with the intrusion of the Dutch East Indies Government there began to emerge the so-called „standard-contract".

As both parties of the contract concerned come from different spheres of law, the problem arises as to which law should be applied. The said Government made it possible to affirm the rights acquired by those agricultural enterprises as „western rights" regulated by the Civil code. This began with the King's Decree of 1915 by which it was stipulated that the right must be stated in a public registration in order that it might be conversed into a European right. Such a conversion effectuated that the concessional right became a real right. There is no obligation according to the law to execute this conversion. If no conversion has taken place, most authors hold that a concessional right is a *personal right* in the sphere of Indonesian Adat Law, as an analogy of the right to rent in the Civil Code, although according to Adat Law there is no sharp distinction between a real right and a personal right.

The author's line of thought is based upon the fact that a concessional right is not formed as a usual real right: the parties concerned are not free to create real rights except those recognized by the law; transfer of agricultural concessions must be approved by the landproprietor; „crop" payment does not form an integrated part of the agricultural concession; historically, provisions of the contract are similar to the requirements to rent a piece of land as regulated by the Rent Ordinance (S. 1856 : 64) ; real estate tax is not levied on agricultural concessions as is usually done to a real right on land; the majority of the jurists admit the character of an agricultural concession as a personal right and case-law too, shows a similar tendency; the Dutch East Indies Government attempted to make possible the conversion of agricultural concessions into „erfpacht" in accordance with the Civil Code; mortgage (Hypotheek) on an agricultural concession is not possible since there is no registration; and the Indonesian Government also admits that an agricultural concession is a personal right.

So, the views of the Dutch plaintiffs in the Bremen tobacco case, according to which agricultural concession rights had to be qualified as real rights, could not be maintained.

347.91 (910)
LIE OEN HOCK

Beberapa tjatatan sekitar pasal-pasal 5 dan 6 Undang² Darurat Th 1951 No. 1 **(Some remarks on art. 5 and 6 of Emergency Law No. 1 of 1951)** in *Beberapa Tindjauan Ilmu Hukum, issued on the occasion of the 8th and 9th Dies Natalis of the Faculty of Law, University of Indonesia 1960* pp. 65 - 74.

The author calls attention to the existing discordance in the administration of justice by the Supreme Court about the question which regulation of civil procedure is in force at present. According to one decision it is the Reglemen Indonesia jang Dibaharui, according to another decision this regulation is binding as a directive only, by a third decision it is ruled that beside the Reglemen Indonesia jang Dibaharui the Rechtsreglement Buitengewesten is in force, whereas it can be concluded from a fourth decision that both regulations are binding as directives only. Because of the influence exercised by the Supreme Court upon the lower courts, a definite decision is urgently needed.

347.794 (910)
SOEKARDONO

Tentang charter-party dan kognossemen **(On the charter-party and the bill of lading)** in *Beberapa Tindjauan Ilmu Hukum, issued on the occasion of the 8th and 9th Dies Natalis of the Faculty of Law, University of Indonesia 1960* pp. 93 - 123.

A discussion on some private law aspects of the sea-law binding at present in the Republic of Indonesia. The author's main attention in this paper is directed to the transportation by sea which is of very great importance for the realization of the „Sandang-Pangan" (= clothes and food) Program of the present government. The private sea-law concerned is regulated in the second Book of the Kitab Undang² Hukum Dagang (the Commercial Law Code). The parts which are explained by the author are the charter-party (the numbers 6 - 19) and the bill of lading (the numbers 20 - 41) whereas in the numbers 38 and 39 the author demonstrates the mutual relation between the two documents. In number 15 an outline is given of the differences between the time-charter and voyage-charter. The author also discusses the possibility for the owner of a ship to transfer his right on the ship to another person after the realization of a charter-contract, and to have a charter-contract concluded by deputies.

39 CUSTOM AND TRADITION

392.544 : 297
HADJI ALI AKBAR

Apakah sebabnja maka agama Islam membuka pintu untuk polygami? **(Why the Moslem religion opens the door to poligamy?)** in *Madjalah Kedokteran Indonesia* 10(4) : 157 - 173, 1960.

With citations the author tries to prove that man is polygamous biologically; that the original monotheistic religions did not forbid polygamy and that even where polygamy is forbidden, illegal ways are found for polygamy. Hence the Moslem religion opens the door to polygamy.

5 NATURAL SCIENCES
53 PHYSICS AND MECHANICS
536 THERMODYNAMICS

536.7 (084.2) : 159.953
JOHANNES, H.

A diagram of thermodynamic functions relations as mnemonic, in *Penerbitan Lustrum II Universitas Gadjah Mada,* Dec. 1959, 9 pages.

A diagram is presented as mnemonic for several thermodynamic relations; it has some features in common with the other mnemonics, but differs that it is a vector diagram (vector polygon).

59 ZOOLOGY

595.78 : 634.772 (910)
PAINE, R. W.

Observations on the banana moth (Nacoleia octasema, Meyr) in Indonesia; and on the introduction from Flores to Java of its parasite (Chelonus striatigena, Cam.) in *Pemberitaan Balai Besar Penjelidikan Pertanian,* Bogor no. 160 pp. 3 - 33, 1960.

N. octasema feeds extensively on Pandanus, Nipa and (in New Guinea) Heliconia as well as on bananas, and that in certain island it feeds on one or more of these wild plants and not at all on cultivated bananas.

In Indonesia the insect was found, besides in Java also in Banda, Timor, Flores, Sumbawa and Bali on bananas; in Sumatra only on Nipa and Pandanus; in Ternate, Amboina and Damar only on Pandanus. P. tectonius seems likely to have been the original host plant, and there is a likelyhood that larvae will be found feeding on its flower bracts.

Cross-mating was carried out between moths, reared from larvae on different foodplants, intermating took place.

A species of Chelonus (subgenus Neochelonella) was causing an 87% mortality of Nacoleia larvae on Nipa in the Bogor Botanic Garden, this parasite was never found on banana-feeding Nacoleia.

Chelonus striatigena, Cam. was found parasitizing Scab Moth on bananas in Flores; collections were bred in captivity in Bogor. Individuals were released in Java and a consignment went to Fiji.

Over 80% of banana bunches in W. Java and Flores are frequently damaged by Scab Moth. There was some evidence, especially on Banda and Timor that the population of N. octasema becomes much reduced towards the end of the dry season.

At Bogor most bananas are subject to attack, but not more than 5% of the crop is rendered unfit for human consumption.

It appeared probable, that the bananafeeding race of the pest was introduced to the Banda Islands by human agency; there is a risk that it will spread to other regions, but quarantine measures are not warranted.

6 APPLIED SCIENCES

61 MEDICAL SCIENCES

615 PHARMACOLOGY AND THERAPEUTICS.

615 : 546.73
TOEBE, A., OEI EK DJIN, S. SOMBU PILLAY, E. NATAADIDJAJA AND G.A. SIWABESSY

Co - 60 : Terapi supervoltage **(Co - 60 supervoltage therapy)** in *Madjalah Kedokteran Indonesia* 10(4) : 137 - 146, 1960.

A general survey and discussion of Cobalt-60 therapy.

616 DISEASE. PATHOLOGY AND MEDICINE

616 — 005.1
HANIFA WIKNJOSASTRO, R.

Perdarahan postpartum **(Post-partum haemorrhage)** in *Madjalah Kedokteran Indonesia* 10 (5) : 175 - 181, 1960.

For the years 1952-56 a maternal death rate of 15% is observed for women with praenatal care and 26.9% for those without. For 1931-35 this was 43%.

The aetiology, prevention, diagnosis and therapy of postpartum haemorrhage are discussed. Uterine packing is still needed in this country. Better praenatal care, bloodtransfusions, etc. are the cause of the drop.

616.24 : 616 - 036.2
HASAN, M.

Epidemiologie penjakit T.B.C. paru² tindjauan **(Epidemiology of lung tuberculosis)** in *Berita Tuberculosea Indonesiensis* 4(2) : 41 - 54, 1960.

A literature compilation of factors of importance in the epidemiology of pulmonary tuberculosis.

616.89 (910)
KUSUMANTO

Kedudukan Psychiatri di Indonesia **(The position of psychiatrics in Indonesia)** in *Madjalah Kedokteran Indonesia* 10(5) : 212 - 215, 1960.

This young and undeveloped branch of medicine in Indonesia does not receive the attention it should have. A plea for treating patients as human beings, where psychiatrics play an important role.

616.7
LIEM TOK DJIEN & TAN TEK TJONG

Multiple cartilaginous exostoses and multiple enchondromatoses in *Madjalah Kedokteran Indonesia* 10(5) : 194 - 199, 1960, 11 photographs.

The radiological characteristic symptoms are described in 2 brothers for cartilaginous exostoses and for multiple enchondromatoses (Ollier's disease) in a 13 year old boy; attention is paid to the differential diagnosis of these two diseases.

616.853 : 616.38 + 616.831 — 009.7
MAHAR MARDJONO

Serangan² sakit perut dan serangan² sakit kepala pada anak² sebagai gedjala epilepsi **(Attacks of abdominal pains and headaches in children affected by epilepsy)** in *Madjalah Kedokteran Indonesia* 10(5) : 200-203, 1960, 6 electro-encephalograms.

Two cases of epilepsy, manifested as paroxysmal abdominal pain in a child of 6 years and as paroxysmal headaches in a child of 11 years are discussed. The diagnosis was made by electro-encephalographic examination. Anticonvulsive treatment with luminal and dilantin in the second case gave satisfactory results.

616.24: 613.95
MOEDARSO, R.

Empyema pada kanak² **(Empyema in children)** in *Madjalah Kedokteran Indonesia* 10 (5) : 204 - 211, 1960.

Empyema in children has become very rare, since the introduction of antibiotics and sulfonamides. A case of staphyllococcus empyema in a child of 5½ years suffering of a pneumonia and afterwards infected with morbilli, is described.

616.65: 616 - 007.6
OETAMA

Prostatektomi retropubic **(Retropubic prostatectomy)** in *Madjalah Kedokteran Indonesia* 10 (4) : 147 - 153, 1960; 5 drawings.

From 1950 - 55, 190 cases of prostatic hypertrophy were admitted in the department of urology of the General Hospital, Djakarta; on 78 patients operation was performed according to the Terence Millin's method. No special instruments (boomerang, etc.) were used. The overall results are similar to those obtained abroad, i.e., minimal haemorrhage during operation, more patients may be operated upon without more risk, the post-operative care is more convenient; post operative complications (osteitis pubis, strictura, etc.) were not observed; shorter hospitalization, operative technique easily to master.

The overall mortality rate was 14.1%.

616.743
SAMSOENARJO

Actinonycosis leher **(Actinonycosis of the neck)** in *Madjalah Kedokteran Indonesia* 10 (4) : 154 - 156, 1960, 3 photographs.

The first case of this infection within 4 years is described; it was treated with curettage and penicillin - oil injection.

617 SURGERY

617.73
MAAS

Glioma retinae in *Madjalah Kedokteran Indonesia* 10 (4) : 131-136, 1960.

A clinical lesson on this subject.

618 GYNAECOLOGY. OBSTETRICS

618.3:616 - 091.5
ROEKMONO & KHOUW WIE GOAN

Tiga kasus toksikosis masa hamil jang diperiksa bedah majat **(Three cases of toxemia of pregnancy investigated with autopsy)** in *Madjalah Kedokteran Indonesia* 10 (5) : 188 - 193, 1960, 3 photographs.

In two cases a diffuse thickening of the basement membrane of the capillaries of the glomerular loops as described a.o. by Bell, could be found. These cases showed the typical necrotic lesions in the liver as described by Sheehan a.o. In one case no characteristic lesion was found in the liver, the kidney, besides a thickening of this basal membrane, showing a widening and thickening of the afferant arterioles; clinically this was a case of recurrent toxemia, symptoms showing in three subsequent pregnancies.

618.15
TOHA, M., MOELJONO DJOJOPRANOTO,
NJOO TJING HWA

An unusual case of a vagina duplex in *Madjalah Kedokteran Indonesia* 10(5) : 182 - 187, 1960, figs., 3 photographs.

A case of vagina duplex with one uterus and one cervix is described; both vagina ended blind; one has a communication with the uterus, the other had a normal one.

Only in recent years the patient complained of dysuria; apparently the outlet had narrowed resulting in haemotokolpos, simulating an ovarian cyst; praeoperatively the vagina duplex was not diagnosticized.

622 (910)
SOLOMON S. LIEB

Developing a mining industry in Indonesia in *Ekonomi dan Keuangan Indonesia* 14 (1 - 2) : 71 - 76, 1961.

This article surveys possibilities for considerable expansion of gold, copper, bauxite and tin mining.

Underground mining of *gold*, virtually at a standstill since 1931, could, with modern processes which have a higher rate of efficiency in extracting gold from ore and with the higher gold price, render profitable deposits which were formerly uneconomical. *Copper* deposits are considerable, especially in Sulawesi, and Indonesia could become the principle supplier for the Far East. *Bauxite* is available in large quantities and provides a sound basis for an aluminium industry. All these minerals should be carefully surveyed to determine exact prospects.

Tin production has fallen annually since 1954 due partly to International Tin Council restrictions and partly to the rundown state of machinery and lack of spare parts. With necessary capital improvements, 1954 production levels could be restored which, at present tin prices, would greatly enhance Indonesia's foreign currency earnings.

63 AGRICULTURE

632.94: 633.491
ROCHIMAT ATMALEKSANA

Dithane Z-78 dan Supravit (Ob 21) sebagai pemberantas Phytophthora infestans de Bary pada kentang **(Dithane Z-78 and Cupravit (Ob 21) for controlling Phytophthora infestans de Bary in potato)** in *Pemberitaan Balai Besar Penjelidikan Pertanian,* Bogor no. 163 pp. 3 - 8, 1961.

Comparative experiments of spraying with these fungicides showed that Bordeaux mixture and Dithane Z-78 gave the best control; Cupravit was slightly less effective; results are tabulated.

631.44 (910)
SOEPRAPTOHARDJO

„Tanah merah" di Indonesia **(„Red soils" in Indonesia)** in *Pemberitaan Balai Besar Penjelidikan Pertanian,* Bogor no. 161 pp. 3-22, 1961; one map.

The greater part of Indonesia is covered with "red soils". At the Great (Soil) Group level these soils may be divided into red-yellow podzolic, latosol and red-yellow mediterranean.

In the red-yellow podzolic regions, soils with Fe concretions throughout the solum, are found extensively, their distribution is correlated with low elevation, undulating to rolling country with volcanic formations in the "Hinterland". For this kind of soil the name "Lateritic" is proposed. Their genesis is not yet clear, but there are indications of connection with palaeclimatic conditions with re - and transgression of the sea. The colour of the B horizon or the layer between 40 - 100 cm markedly suggests differences in local climate, parent material and time (?). According to criteria allowed for differentiating Great (Soil) Groups in lower categories this character is used to differentiate each Great (Soil) Group into Sub(?) Groups. Illustrated by tables.

633.18 (921)
TAN HONG TONG

Some aspects of the questions of intercropping in *Communications of the Research Institute of the Sumatra Planters' Association*, General Series no. 69, pp. 1 - 14, 1960.

The drive of the Government for growing more rice induced estate companies to restudy the problem of intercropping (planting rice) and its influence on the perennial crops.

Experiments with intercropping in a young Hevea plantation showed a beneficial influence as compared to a normal cover crop at the 1% level. This influence is attributed to the extra fertilizer applied and tilling.

Experiments in oil palm plantations in Africa are cited where the same was observed, followed by a detrimental influence of intercropping in later years.

Recommended for Hevea in Sumatra is intercropping for the first two years with alternating rice and legume and not rice and secondary crops; the leguminous cover should be worked under to improve better growth conditions.

67 INDUSTRIES AND CRAFTS BASED ON PROCESSABLE MATERIALS

678.4 : 541.24
ALTGELT, K. & G. v. SCHULZ

Bestimmung der molekularen Konstanten von Naturkautschuk II. Viscositätszahl (Staudinger-Index), Sedimentation und Diffusion in Cyclohexan (**Determination of the molecular constants of Natural Rubber II. Viscosity coefficient (Staudinger-Index), Sedimentation and Diffusion in Cyclohexan**) in *Communications of the Balai Penjelidikan dan Pemakaian Karet*, Bogor no. 127 pp. 1 - 14, 1960. From the Institute for Physical Chemistry of the University Mainz.

The intrinsic viscosity of rubber in cyclohexane is independent of the temperature, the time of dissolution, and the time of stocking, if oxygen and light are excluded. For the sample of crepe rubber treated in this paper $[\eta] = 650 \pm 20$ cm^3 g^{-1} has been found.

From centrifugation and diffusion measurements in cyclohexane the sedimentation and diffusion constants are found to be $s_0 = 4{,}6.10^{-13}$ and $D_0 = 0.48.10^{-7}$. The partial specific volume of rubber in cyclohexane is $\bar{V}_2 = 1.10$. From these data the molecular weight $M = 1.6.10^6$ is calculated.

By thermodynamic evaluation of these measurements cyclohexane is shown to be a very good solvent with virial coefficient $B_{SD} = 6.5$ atm. cm^6 g^{-2} and $C_{SD} = 8.10^3$ atm. cm^9 g^{-3}. The radius of gyration is 760 ± 80 A°.

678.4:541.24
ALTGELT, K. & G. v. SCHULZ

Bestimmung der molekularen Konstanten von Naturkautschuk III. Molekulargewicht, Trägheitsradius und thermodynamische Eigenschaften von Cyclohexane — Kautschuklösungen nach der Lichtstreuungsmethode **(Estimation of the molecular constants of natural rubber III. Molecularweight, intrinsic viscosity and thermodynamic properties if cyclohexane-rubber solutions according to the light-scattering method)** in *Communications of the Institute for Rubber and Development,* Bogor no. 128 pp. 15 - 26, 1960. From the Institute for Physical Chemistry of the University Mainz.

By light scattering measurements of crepe rubber dissolved in cyclohexane $\bar{M}_w = 1{,}85.10^6$ is found. Comparing this value with measurements of sedimentation and diffusion the most probable value of the average molecular weight for this sample is $\bar{M}_w = 1{,}7.10^6$.

The following relation between $\bar{M}_w$ and intrinsic viscosity for natural rubber in cyclohexane is proposed.

$$\bar{M}_w = 200\ [\eta]^{1,4}$$

The second virial coefficient and the intrinsic viscosity are increasing in the series benzene, cyclohexene, cyclohexane. The heat of dilution is exothermic in cyclohexane and endothermic in both other solvents.

The radius of gyration as evaluated by light scattering in $R_w = 1000$ A°. The most probable value considering also friction measurements is $\bar{R}_w = 900 \pm 100$ A°.

ANNOUNCEMENT

It is hereby notified that the Index to the *Indonesian Abstracts* Vol. III will be published shortly.

Editor

LIST OF PERIODICALS AND IRREGULAR PUBLICATIONS WHICH ARE ABSTRACTED IN THIS ISSUE AND THE NAME OF PUBLISHERS OF THE MATERIALS

Beberapa Tindjauan Ilmu Hukum (Some notes on jurisprudence) Indonesian. Irregular.	— Fakultas Hukum dan Pengetahuan Masjarakat, Universitas Indonesia, Djalan Salemba 4, Djakarta.
Berita Tuberculosea Indonesiensis (News of Tuberculosis in Indonesia). Indonesian. English. Bimonthly.	— Departemen Kesehatan, Panitia Tuberculosis, Djalan Malioboro 62, Jogjakarta.
Communications dari Balai Penjelidikan dan Pemakaian Karet (Communications of the Institute for Rubber Research and Development). Indonesian. English. German. Irregular.	— Balai Penjelidikan dan Pemakaian Karet, Djalan Salak 1, Bogor.
Communications of the Research Institute of the Sumatra Planters' Association. English. Irregular.	— Research Institute of the Sumatra Planters' Association, Kampung Baru, P. O. Box 104, Medan.
Ekonomi dan Keuangan Indonesia (Economics and Finance of Indonesia). Indonesian. English. Monthly.	— Jajasan Penerbitan Ekonomi dan Keuangan, c/o P.T. Pembangunan, Djalan Gunung Sahari 84, Djakarta.
Hukum dan Masjarakat (Law and Society). Indonesian. Monthly.	— Perhimpunan Sardjana Hukum Indonesia (PERSAHI), Djalan Segara 17, Djakarta.
Madjalah Ekonomi (Economy). Indonesian. Quarterly.	— Lembaga Pers, Fakultas Ekonomi, Universitas Padjadjaran, Djalan Tjisangkuj 62, Bandung.
Madjalah Kedokteran Indonesia (Medical Journal of Indonesia). Indonesian. English. Monthly.	— Ikatan Dokter Indonesia, Djalan Dr Sam Ratulangi 29, Djakarta.
Pemberitaan Balai Besar Penjelidikan Pertanian (Contributions of the General Agricultural Research Station). Indonesian. English. Irregular.	— Balai Besar Penjelidikan Pertanian, Djalan Merdeka 99, Bogor.
Penerbitan Lustrum II Universitas Gadjah Mada (Publication of the Tenth Anniversary Committee of Gadjah Mada University). Indonesian. Irregular.	— Universitas Gadjah Mada, Bulaksumur, Jogjakarta.
Tjeramah untuk memperingati Dies Natalis XI Universitas Gadjah Mada (Lecture to commemorate the XIth Dies Natalis of Gadjah Mada University). Indonesian. Irregular.	— Universitas Gadjah Mada, Bulaksumur, Jogjakarta.

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The Bulletin is an irregular publication on nonscientific subjects such as reports, communications, and information connected with the activities of scientific institutions in Indonesia. Publications in the serial Bulletin which have appeared are *Directory of Scientific Institutions in Indonesia*, *Report on Scientific Research in Indonesia*, and *Indonesian Scientific Periodical Index 1960.*

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